



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2013-1029; Directorate Identifier 2013-NM-177-AD]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bombardier, Inc. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede airworthiness directive (AD) 2010-13-04, which applies to certain Bombardier, Inc. Model DHC-8-400 series airplanes. AD 2010-13-04 requires modifying the nose landing gear (NLG) trailing arm. Since we issued AD 2010-13-04, we received a report of several missing or damaged pivot pin retention bolts. This proposed AD would require installing a new pivot pin retention mechanism. This proposed AD would also add airplanes to the applicability. We are proposing this AD to prevent failure of the pivot pin retention bolt, which could result in a loss of directional control or loss of a NLG tire during take-off or landing.

**DATES:** We must receive comments on this proposed AD by **[INSERT DATE 45**

**DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the MCAI, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Ricardo Garcia, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7331; fax (516) 794-5531.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include “Docket No. FAA-2013-1029; Directorate Identifier 2013-NM-177-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

On June 10, 2010, we issued AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010). AD 2010-13-04 requires actions intended to address an unsafe condition on the products listed above.

Since we issued AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010), Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2009-29R1, dated August 14, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Two in-service incidents have been reported on DHC-8 Series 400 aircraft in which the nose landing gear (NLG) trailing arm pivot pin retention bolt (part number NAS6204-13D) was damaged. One incident involved the left hand NLG tire which ruptured on take-off. Investigation determined that the retention bolt failure was due to repeated contact of the castellated nut with the towing device including both the towbar and the towbarless rigs. The loss of the retention bolt allowed the pivot pin to migrate from its normal position and resulted in contact with and rupture of the tire. The loss of the pivot pin could compromise retention of the trailing arm and could result in a loss of directional control due to loss of nose wheel steering. The loss of an NLG tire or the loss of directional control could adversely affect the aircraft during take off or landing.

To prevent the potential failure of the pivot pin retention bolt, Bombardier Aerospace has developed a modification which includes a new retention bolt, a reverse orientation of the retention bolt and a rework of the weight on wheel (WOW) proximity sensor cover to provide clearance for the re-oriented retention bolt.

Since the original issue of this [Canadian] AD [which corresponds to AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010)], there have been several reports of pivot pin retention bolts found missing or damaged. Additional investigation determined that the failures were caused by high contact stresses on the retention bolt due to excessive frictional torque on the pivot pin and an adverse tolerance condition at the retention bolt.

Revision 1 of this [Canadian] AD mandates the installation of a new pivot pin retention mechanism.

This proposed AD would also add airplanes to the applicability. AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010), affected Model DHC-8-400 series airplanes, serial numbers 4001, 4003, 4004, 4006, and 4008 through 4238 inclusive. This proposed AD would affect serial numbers 4001 through 4435 inclusive. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-1029.

#### **Relevant Service Information**

Bombardier, Inc. has issued Service Bulletin 84-32-110, Revision A, dated April 8, 2013. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

#### **FAA's Determination and Requirements of This Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

#### **Costs of Compliance**

We estimate that this proposed AD affects 383 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Modification of the NLG trailing arm [retained actions from AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010)]	3 work-hours X \$85 per hour = \$255	\$100	\$355	\$22,365
Installation of new pivot pin retention mechanism [new proposed action]	2 work-hours X \$85 per hour = \$170	None	\$170	\$65,110

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate

### Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress

charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This proposed regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010), and adding the following new AD:

**Bombardier, Inc.:** Docket No. FAA-2013-1029; Directorate Identifier 2013-NM-177-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD supersedes AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010).

#### **(c) Applicability**

This AD applies to Bombardier, Inc. Model DHC-8-400, -401, and -402 airplanes, certificated in any category, serial numbers 4001 through 4435 inclusive.



**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing Gear.

**(e) Reason**

This AD was prompted by a report of several missing or damaged pivot pin retention bolts. We are issuing this AD to prevent failure of the pivot pin retention bolt, which could result in a loss of directional control or a NLG tire during take-off or landing.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Retained Actions and Compliance**

This paragraph restates the requirements of paragraph (f)(1) of AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010), with no changes. For airplanes having serial numbers 4001, 4003, 4004, 4006, and 4008 through 4238 inclusive: Within 2,000 flight hours after July 28, 2010 (the effective date of AD 2010-13-04), modify the NLG trailing arm by incorporating Bombardier Modification Summary 4-113599, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-32-65, Revision A, dated March 2, 2009.

**(h) New Requirement of this AD: Installing a New Pivot Pin Retention Mechanism**

For airplanes having serial numbers 4001 through 4435 inclusive: Within 6,000 flight hours or 36 months after the effective date of this AD, whichever occurs first, install a new pivot pin retention mechanism by incorporating Bombardier Modification

Summary 4-113749, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-32-110, Revision A, dated April 8, 2013.

**(i) Credit for Actions Accomplished in Accordance with Previous Service Information**

(1) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before July 28, 2010 (the effective date of AD 2010-13-04, Amendment 39-16335 (75 FR 35622, June 23, 2010)), using the Accomplishment Instructions of Bombardier Service Bulletin 84-32-65, dated December 17, 2008, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 84-32-110, dated December 21, 2012, which is not incorporated by reference in this AD.

**(j) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, ANE-170, New York Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your

appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or by the DAH with a State of Design Authority's design organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD. You are required to ensure the product is airworthy before it is returned to service.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2009-29R1, dated August 14, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-1029.

(2) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; e-mail [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>. You may review copies of this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on December 11, 2013.

John P. Piccola,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

**[4910-13-P]**

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